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The Economy and Environment Program for Southeast Asia (EEPSEA) was established in May 1993 to support training and research in environmental and resource economics across its 9 member countries: Cambodia, China, Indonesia, Laos, Malaysia, Papua New Guinea, the Philippines, Thailand, and Viet Nam. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to pollcymakers.

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How Much Will People Pay for Wildlife Conservation? – A Study from Thailand

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If politicians are to make informed decisions about funding wildlife conservation, it is important that they know what the general public thinks about the issues involved, the factors that shape people's perceptions and how much individuals would be willing to pay to help wildlife. Now, a new EEPSEA study from Thailand has looked into these issues and has found out what people in →

A summary of EEPSEA research report 2008-RR7, 'Private Contributions Towards the Provision of Public Goods: The Conservation of Thailand's Endangered Species' by Orapan Nabangchang, Sukhothai Thammatirat Open University, Tambon Bang Pud, Amphoe Pakkret, Nonthaburi, Thailand. Tel: (66) 2 965 4737/8 Fax: (66) 2 965 4735 E-mail: onabangchang@idrc.org.sg

"People would be willing to...

Mean willingness to pay estimates (protests votes removed)

Payment Mechanisms	MWTP Baht/hh		MWTP (USD/hh)	
	Parametric values	Non-parametric values	Parametric values	Non-parametric values
Tax with seed money (N = 224)	1,091	769	32.1	22.6
Tax without seed money (N = 188)	901	670	26.5	19.7
Voluntary contribution with seed money and refund with seed (N = 211)	598	583	17.6	17.2
Voluntary contribution without seed money and refund (N = 189)	575	601	16.9	17.7
Pooled tax (N = 412)	1,006	728	29.6	21.4
Pooled voluntary contribution fund (N =400)	586	594	17.2	17.5
Total pooled sample (N = 812)	802	662	23.6	19.5

Note: Exchange rate @ 34 Baht to 1 USD

Bangkok think about wildlife conservation in the country and how much they would be willing to pay to support it.

Orapan Nabangchang from the Sukhothai Thammatirat Open University carried out the study. She finds that the majority of the respondents would vote to pass a referendum to impose a 250 Baht income tax surcharge to generate funds for conservation of a selected group of Thailand's endangered species. If this surcharge were imposed on the whole of Bangkok's population, it would raise significantly more money than is allocated to the current budget of Thailand's National Park, Wildlife and Plant Conservation Department. This potential income would allow the implementation of a comprehensive and integrated wildlife conservation programme in the country.

What do People Think About Wildlife Conservation?

The main objective of Orapan's study was to develop an understanding of why people in Bangkok give money to wildlife charities. She also aimed to see how much people value the conservation of animals and to assess the best way to collect money for wildlife protection.

To obtain the necessary information for this assessment, two types of people were interviewed. One group of respondents were people from Bangkok who regularly give to charitable organizations dealing with wildlife and conservation issues. The other group of respondents were randomly selected from the city's general population. Choosing these two groups of people allowed Orapan to assess what socio-economic factors, if any, affect people's willingness to give money to conservation. Face to face interviews were carried out with 955 people. Of these, 840 were 'general respondents' and 155 were 'regular givers'.

The study used a questionnaire to gather information on a range of inter-related issues. This information included socio-economic details and data on how and why people contribute to conservation causes. The questionnaire was also used to gauge people's knowledge about wildlife, the importance they attach to conservation measures and the trust they place in conservation agencies. People were also asked how they would like public resources allocated to conserve six key species. These species were: elephants, dugongs, gibbons, hornbills, marine turtles and tigers. To see which animals were most important, people were shown photographs of the animals, two at a time. They were asked which of each pair of animals they would save, if only enough money was available to save one.

People's willingness to support conservation funds for endangered species can be influenced by their association of those species with various attributes. Such preferences were analysed by asking respondents to assess each of the six endangered species on five attributes which might influence their perceived importance.

Valuing Wildlife

Orapan used the Contingent Valuation Method (CVM) to estimate the value Bangkok citizens give to the conservation of Thailand's endangered wildlife. To do this she first briefed respondents about the current conservation situation in the country. She then gave them details about a proposed Comprehensive

pay to support wildlife conservation."

Programme for the Protection and Conservation of Endangered Wildlife. Respondents were told that this programme of work would include wildlife habitat protection, in-depth wildlife studies, the prevention of both wildlife poaching and the illegal trade in wildlife and wildlife products, and the rehabilitation of wild animals and their return to the wild.

People were asked to consider one of four different 'payment scenarios' relating to the proposed conservation programme. Two of these were 'mandatory', the other two voluntary. Additional features of the fund's 'mobilization campaign' were included to test their effects on people's willingness to pay.

In the mandatory payment mechanisms, respondents were asked to vote 'for' or 'against' a referendum to impose an income tax surcharge 'with' and 'without' seed money. This surcharge would be used to set up a 'Wildlife Protection and Conservation Fund'.

In the 'with' seed money option it was explained that, if the government could not initially mobilize 25% funds from large donors (the seed money), then the programme would not go ahead. This would be the case even if the majority of the people voted for the policy. In the 'without' seed money option, the existence of seed money from large donors was not a prerequisite for the campaign to start. Under both these mandatory payment schemes, over 50% of respondents would have to approve them through the referendum vote for them to go ahead.

Are Voluntary Payments Best?

The two other payment scenarios involved voluntary payments to a 'Wildlife Protection and Conservation Fund'. In this case the two variants were 'with' and 'without' seed money and refunds. In the 'with' seed money, respondents were told that the conservation program would be launched only under certain conditions: if 25% of the required capital could be mobilized as 'seed money' from donors sources; and if the combined value of donations from large donors and the general public were at least 50% of the required capital. They were also told that, if the conservation program could not be launched because of a lack of funds, contributions from the public would be refunded.

These 'seed money' and 'refund' variants were put into the assessment to see how they would affect people's willingness to pay for conservation. It was expected that the seed money and refunds would increase the credibility of any scheme.

The respondents were randomly assigned to one of the above four 'payment scenarios'. They were then asked whether they would be willing to contribute a specified amount (a bid price) to support the proposed conservation programme. Five bid prices were used: 100 Baht (2.94 USD), 150 Baht (4.4 USD), 250 Baht (7.4 USD), 1,000 Baht (29.4 USD), and 3,000 Baht (88.2 USD). Respondents were randomly assigned a bid price to consider.

Why People Give

It was found that there were a number of differences between the general population and those who regularly give to conservation. In particular, the regular contributors belong to somewhat more affluent socio-economic groups.

It was also found that one of the key factors that encourages people to contribute to charitable organizations is the behaviour of the charitable organizations themselves. The most effective ways to trigger donations

Total willingness to pay

Voluntary Contribution		Mandatory Tax	
MWTP (Baht/hh)	586	Highest bid passing referendum (Baht/hh)	250
Total number of hhs in Bangkok	2,150,706	Total number of taxpayers in Bangkok	2,268,902
		Total number of hhs paying (assuming 2 tax payers/hh)	1,134,451
Total sum (mil. Baht)	1,260	Total sum (mil. Baht)	284
Total sum (mil. USD)	37	Total sum (mil. USD)	8.4

Note: A referendum is deemed to have 'passed' if the majority of respondents vote for it.

were found to be: Directly approaching people; making information conveniently accessible on stalls and booths in department stores and exhibition halls; and providing credible information. Positive peer group influence was also cited by a substantial number of respondents as a key factor that makes them contribute to conservation. These findings should make interesting reading for organizations looking for funds.

In terms of the value that people put on specific species, the following is apparent: elephants are considered as being of highest importance, followed by tigers, hornbills, marine turtles, dugongs, and lastly, gibbons. These findings are of value since they can be used, in conjunction with other data, to help prioritize the allocation of current sparse conservation resources.

How Much Would People Pay?

It is clear that many people in Bangkok are willing to pay for conservation and that they would be more willing to pay through a mandatory payment mechanism rather than through a voluntary set-up.

Under the voluntary payment mechanisms assessed, people's mean willingness to pay (MWTP) would be a one-time payment of 586 Baht per household. Since Bangkok's population totals 2,150,706 households, the potential funds that could be mobilized in this way is 1,260 million Baht or approximately 37 million USD.

Under the mandatory payment vehicles, the MWTP would be 972 Baht per household. However, the highest amount that the majority of respondents agreed to (in the referendum vote) was only 250 Baht. If this amount were chosen for the income tax surcharge, assuming that payment would be made by only one taxpayer per household, the number of contributors would be 1.13 million taxpayers and the income tax surcharge could collect about 284 million Baht or 8.4 million USD.

In developed countries, studies have shown that incentives included in payment mechanisms have helped convince people to contribute to conservation schemes. However, the results of this study show that in Thailand the inclusion of features such as seed money and refund options would not have any effect on how much people would be willing pay. There were no significant statistical differences between the MWTPs for a mandatory tax 'with' and 'without' seed money. The same was true for the MWTPs for the voluntary contributions 'with' and 'without' the seed money and refund option.

Funding Future Conservation

Policy-wise, the results suggest that a mandatory payment mechanism has the best chance of winning public support. The results also indicate that it is likely that most people would accept an income tax surcharge of about 250 baht. In this case, as described above, the total sum that could be mobilized would be 8.4 million USD. This is no small sum, especially when compared to current conservation budgets. In 2007, for example, the budget allocated to the Wildlife Conservation Office under the National Park, Wildlife and Plant Conservation Department was 407 million Baht or around 12 million USD. The budget for the Department of Marine and Coastal Resource was only 45.16 million Baht or 1.33 million USD. Funds for specific endangered species represented even smaller fractions of both departments' budgets.

It is therefore clear that the sum that could be raised from a mandatory income tax surcharge of only 250 Baht per household could finance a comprehensive and integrated programme for the conservation of the six endangered terrestrial and marine species covered in this study. Orapan therefore recommends that all policy-makers and organisations involved in wildlife conservation in Thailand seriously consider the findings of this study and incorporate them in future plans to raise funds to save Thailand's endangered wildlife.

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